

IN THE CLAIMS:

The present listing of the claims replaces all previous versions and listings.

1-3. (Canceled)

4. (Currently Amended) A fluorescent intensity measuring method according to claim 3, further comprising which measures the intensity of minute points which are arranged on a substrate having a substantially flat surface and include a fluorescent substance, comprising:

a first imaging step of emitting light with a wavelength with which the fluorescent substance can be excited and obtaining an image of each minute point including the fluorescent substance as a first image;

a second imaging step of obtaining an image of foreign matter adhering on the substrate as a second image by light with a wavelength which does not excite the fluorescent substance;

an extraction step of obtaining a binarized image by extracting a foreign matter area from the second image;

a foreign matter elimination step of disabling an image at a part overlapping the foreign matter area in the first image with the binarized image being used as a mask;

an expansion step of expanding the foreign matter area of the binarized image by a determined quantity;

a normalization step of normalizing the measured intensity of the minute point by using a reference area of the minute point; and

a reliability judgment step of obtaining an area of each minute point after the foreign matter elimination step and judging the reliability of the measurement value by using a ratio of the obtained area and the reference area of the minute point.

5. (Original) A fluorescent intensity measuring method according to claim 4, further comprising a correction step of correcting the second image by using a reference image.

6. (Original) A fluorescent intensity measuring method according to claim 4, wherein the extraction step obtains the binarized image by using a differential image acquired from the second image.

7. (Original) A fluorescent intensity measuring method according to claim 6, wherein the extraction step determines a binarization level of the binarized image by using a frequency distribution of the differential signal corresponding to each pixel.

8. (Original) A fluorescent intensity measuring method according to claim 7, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

9. (Original) A fluorescent intensity measuring method according to claim 6, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

10. (Currently Amended) A fluorescent intensity measuring method ~~according to claim 3, further comprising which measures the intensity of minute points which are~~

arranged on a substrate having a substantially flat surface and include a fluorescent substance, comprising:

a first imaging step of emitting light with a wavelength with which the fluorescent substance can be excited and obtaining an image of each minute point including the fluorescent substance as a first image;

a second imaging step of obtaining an image of foreign matter adhering on the substrate as a second image by light with a wavelength which does not excite the fluorescent substance;

an extraction step of obtaining a binarized image by extracting a foreign matter area from the second image;

a foreign matter elimination step of disabling an image at a part overlapping the foreign matter area in the first image with the binarized image being used as a mask;

an expansion step of expanding the foreign matter area of the binarized image by a determined quantity;

a normalization step of normalizing the measured intensity of the minute point by using a reference area of the minute point; and

a correction step of correcting the second image by using a reference image.

11. (Currently Amended) A fluorescent intensity measuring method according to ~~claim 3, which measures the intensity of minute points which are arranged on a substrate having a substantially flat surface and include a fluorescent substance, comprising:~~

a first imaging step of emitting light with a wavelength with which the fluorescent substance can be excited and obtaining an image of each minute point including the fluorescent substance as a first image;

a second imaging step of obtaining an image of foreign matter adhering on the substrate as a second image by light with a wavelength which does not excite the fluorescent substance;

an extraction step of obtaining a binarized image by extracting a foreign matter area from the second image;

a foreign matter elimination step of disabling an image at a part overlapping the foreign matter area in the first image with the binarized image being used as a mask;

an expansion step of expanding the foreign matter area of the binarized image by a determined quantity; and

a normalization step of normalizing the measured intensity of the minute point by using a reference area of the minute point;

wherein the extraction step obtains the binarized image by using a differential image acquired from the second image.

12. (Original) A fluorescent intensity measuring method according to claim 11, wherein the extraction step determines a binarization level of the binarized image by using a frequency distribution of the differential signal corresponding to each pixel.

13. (Original) A fluorescent intensity measuring method according to claim 12, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

14. (Original) A fluorescent intensity measuring method according to claim 11, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

15. (Currently Amended) A fluorescent intensity measuring method ~~according to claim 2, further comprising which measures the intensity of minute points which are~~ arranged on a substrate having a substantially flat surface and include a fluorescent substance, comprising:

a first imaging step of emitting light with a wavelength with which the fluorescent substance can be excited and obtaining an image of each minute point including the fluorescent substance as a first image;

a second imaging step of obtaining an image of foreign matter adhering on the substrate as a second image by light with a wavelength which does not excite the fluorescent substance;

an extraction step of obtaining a binarized image by extracting a foreign matter area from the second image;

a foreign matter elimination step of disabling an image at a part overlapping the foreign matter area in the first image with the binarized image being used as a mask;

an expansion step of expanding the foreign matter area of the binarized image by a determined quantity; and

a reliability judgment step of obtaining an area of each minute point after the foreign matter elimination step and judging the reliability of the measurement value by using a ratio of the obtained area and the reference area of the minute point.

16. (Original) A fluorescent intensity measuring method according to claim 15, further comprising a correction step of correcting the second image by using a reference image.

17. (Original) A fluorescent intensity measuring method according to claim 15, wherein the extraction step obtains the binarized image by using a differential image acquired from the second image.

18. (Original) A fluorescent intensity measuring method according to claim 17, wherein the extraction step determines a binarization level of the binarized image by using a frequency distribution of the differential signal corresponding to each pixel.

19. (Original) A fluorescent intensity measuring method according to claim 18, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

20. (Original) A fluorescent intensity measuring method according to claim 17, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

21. (Canceled)

22. (Currently Amended) A fluorescent intensity measuring method ~~according to claim 2, which measures the intensity of minute points which are arranged on a substrate having a substantially flat surface and include a fluorescent substance, comprising:~~
~~a first imaging step of emitting light with a wavelength with which the fluorescent substance can be excited and obtaining an image of each minute point including the fluorescent substance as a first image;~~

a second imaging step of obtaining an image of foreign matter adhering on the substrate as a second image by light with a wavelength which does not excite the fluorescent substance;

an extraction step of obtaining a binarized image by extracting a foreign matter area from the second image;

a foreign matter elimination step of disabling an image at a part overlapping the foreign matter area in the first image with the binarized image being used as a mask; and

an expansion step of expanding the foreign matter area of the binarized image by a determined quantity;

wherein the extraction step obtains the binarized image by using a differential image acquired from the second image.

23. (Original) A fluorescent intensity measuring method according to claim 22, wherein the extraction step determines a binarization level of the binarized image by using a frequency distribution of the differential signal corresponding to each pixel.

24. (Original) A fluorescent intensity measuring method according to claim 23, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

25. (Original) A fluorescent intensity measuring method according to claim 22, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

26. (Canceled)

27. (Currently Amended) A fluorescent intensity measuring method according to claim 26, further comprising which measures the intensity of minute points which are arranged on a substrate having a substantially flat surface and include a fluorescent substance, comprising:

a first imaging step of emitting light with a wavelength with which the fluorescent substance can be excited and obtaining an image of each minute point including the fluorescent substance as a first image;

a second imaging step of obtaining an image of foreign matter adhering on the substrate as a second image by light with a wavelength which does not excite the fluorescent substance;

an extraction step of obtaining a binarized image by extracting a foreign matter area from the second image;

a foreign matter elimination step of disabling an image at a part overlapping the foreign matter area in the first image with the binarized image being used as a mask;

a normalization step of normalizing the measured intensity of the minute point by using a reference area of the minute point; and

a reliability judgment step of obtaining an area of each minute point after the foreign matter elimination step and judging the reliability of the measurement value by using a ratio of the obtained area and the reference area of the minute point.

28. (Original) A fluorescent intensity measuring method according to claim 27, further comprising a correction step of correcting the second image by using a reference image.

29. (Original) A fluorescent intensity measuring method according to claim 27, wherein the extraction step obtains the binarized image by using a differential image acquired from the second image.

30. (Original) A fluorescent intensity measuring method according to claim 29, wherein the extraction step determines a binarization level of the binarized image by using a frequency distribution of the differential signal corresponding to each pixel.

31. (Original) A fluorescent intensity measuring method according to claim 30, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

32. (Original) A fluorescent intensity measuring method according to claim 29, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

33. (Currently Amended) A fluorescent intensity measuring method according to claim 26, further comprising which measures the intensity of minute points which are arranged on a substrate having a substantially flat surface and include a fluorescent substance, comprising:

a first imaging step of emitting light with a wavelength with which the fluorescent substance can be excited and obtaining an image of each minute point including the fluorescent substance as a first image;

a second imaging step of obtaining an image of foreign matter adhering on the substrate as a second image by light with a wavelength which does not excite the fluorescent substance;

an extraction step of obtaining a binarized image by extracting a foreign matter area from the second image;

a foreign matter elimination step of disabling an image at a part overlapping the foreign matter area in the first image with the binarized image being used as a mask;

a normalization step of normalizing the measured intensity of the minute point by using a reference area of the minute point; and

a correction step of correcting the second image by using a reference image.

34. (Currently Amended) A fluorescent intensity measuring method according to ~~claim 26~~, which measures the intensity of minute points which are arranged on a substrate having a substantially flat surface and include a fluorescent substance, comprising:

a first imaging step of emitting light with a wavelength with which the fluorescent substance can be excited and obtaining an image of each minute point including the fluorescent substance as a first image;

a second imaging step of obtaining an image of foreign matter adhering on the substrate as a second image by light with a wavelength which does not excite the fluorescent substance;

an extraction step of obtaining a binarized image by extracting a foreign matter area from the second image;

a foreign matter elimination step of disabling an image at a part overlapping the foreign matter area in the first image with the binarized image being used as a mask; and

a normalization step of normalizing the measured intensity of the minute point by using a reference area of the minute point;

wherein the extraction step obtains the binarized image by using a differential image acquired from the second image.

35. (Original) A fluorescent intensity measuring method according to claim 34, wherein the extraction step determines a binarization level of the binarized image by using a frequency distribution of the differential signal corresponding to each pixel.

36. (Original) A fluorescent intensity measuring method according to claim 35, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

37. (Original) A fluorescent intensity measuring method according to claim 34, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

38. (Currently Amended) A fluorescent intensity measuring method ~~according to claim 1, further comprising which measures the intensity of minute points which are arranged on a substrate having a substantially flat surface and include a fluorescent substance, comprising:~~

a first imaging step of emitting light with a wavelength with which the fluorescent substance can be excited and obtaining an image of each minute point including the fluorescent substance as a first image;

a second imaging step of obtaining an image of foreign matter adhering on the substrate as a second image by light with a wavelength which does not excite the fluorescent substance;

an extraction step of obtaining a binarized image by extracting a foreign matter area from the second image;

a foreign matter elimination step of disabling an image at a part overlapping the foreign matter area in the first image with the binarized image being used as a mask; and

a reliability judgment step of obtaining an area of each minute point after the foreign matter elimination step and judging the reliability of the measurement value by using a ratio of the obtained area and the reference area of the minute point.

39. (Original) A fluorescent intensity measuring method according to claim 38, further comprising a correction step of correcting the second image by using a reference image.

40. (Original) A fluorescent intensity measuring method according to claim 38, wherein the extraction step obtains the binarized image by using a differential image acquired from the second image.

41. (Original) A fluorescent intensity measuring method according to claim 40, wherein the extraction step determines a binarization level of the binarized image by using a frequency distribution of the differential signal corresponding to each pixel.

42. (Original) A fluorescent intensity measuring method according to claim 41, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

43. (Original) A fluorescent intensity measuring method according to claim 40, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

44. (Canceled)

45. (Currently Amended) A fluorescent intensity measuring method according to claim 1, which measures the intensity of minute points which are arranged on a substrate having a substantially flat surface and include a fluorescent substance, comprising:

a first imaging step of emitting light with a wavelength with which the fluorescent substance can be excited and obtaining an image of each minute point including the fluorescent substance as a first image;

a second imaging step of obtaining an image of foreign matter adhering on the substrate as a second image by light with a wavelength which does not excite the fluorescent substance;

an extraction step of obtaining a binarized image by extracting a foreign matter area from the second image; and

a foreign matter elimination step of disabling an image at a part overlapping the foreign matter area in the first image with the binarized image being used as a mask;

wherein the extraction step obtains the binarized image by using a differential image acquired from the second image.

46. (Original) A fluorescent intensity measuring method according to claim 45, wherein the extraction step determines a binarization level of the binarized image by using a frequency distribution of the differential signal corresponding to each pixel.

47. (Original) A fluorescent intensity measuring method according to claim 46, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

48. (Original) A fluorescent intensity measuring method according to claim 45, wherein the differential signal is standardized with an intensity in a minute area corresponding to the differential signal.

49. (Canceled)

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